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CACTUS AND SUCCULENT JOURNAL

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No. 1



Lower California, Mexico



*Journal of the***CACTUS AND SUCCULENT SOCIETY OF AMERICA***Published by*

THE CACTUS AND SUCCULENT SOCIETY OF AMERICA

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A monthly magazine to promote the Society and devoted to Cacti and Succulents for the dissemination of knowledge and the recording of hitherto unpublished data in order that the culture and study of these particular plants may attain the popularity which is justly theirs. "The Cactaceae," by N. L. Britton and J. N. Rose, has been adopted by this Journal for purposes of identification. (Membership and subscription \$3.00 per year, foreign \$3.50.) Mail membership application and subscription to the Secretary, Mr. W. M. Ketteringham, 610 West 65th Street, Los Angeles, Calif.

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SAN FRANCISCO CACTUS SHOW

When it was announced, earlier in the year, that the July meeting of the Society was planned for San Francisco, several of our enthusiastic Northern California members determined that this meeting would be a red letter one.

Accordingly, they planned, organized, worked and planned some more. And presto, what have they pulled out of their hat? The first all Cactus and Succulent Show in Northern California! To be held at the Palace Hotel San Francisco, on Friday, Saturday and Sunday, July 17th, 18th and 19th. They have also planned an official luncheon at the Palace Hotel in conjunction with the regular meeting on Sunday, July 19th, at 12:00 noon.

Here is a list of the Competitive Classes that they have established. Ribbons will be awarded in all classes.

Anyone wishing to exhibit can obtain an entry blank and rules by writing to the Secretary. Also please write for reservations if you are planning to attend the luncheon in conjunction with the meeting.

W. M. KETTERINGHAM,
610 West 65th St.,
Los Angeles, Calif.

Competitive Classes

1. Best entry representative of any one particular family, genus or group of cactus.
2. Best entry representative of any one particular family, genus or group of succulents.
3. Collection of succulents or cacti best exemplifying correct and complete scientific classification.
4. Best individual specimen of cactus.
5. Best individual specimen of succulent.
6. Best rare cactus.
7. Best rare succulent.
8. Best individual grafted plant.
9. Best individual crest or monstrose form.
10. Best flowering plant—cactus or succulent.
11. Exhibit showing most effective decorative arrangement of cacti or succulents (or both) in bowls.
12. Exhibit showing most effective decorative arrangement in space not less than 10 square feet. Maximum space to be limited to show committee.
13. Best pictorial representation of cacti or succulents—(two divisions):
 - a. Pictorial or decorative quality.
 - b. Greatest scientific value.
14. Best exhibit of seedlings.
15. Best exhibit showing methods of propagation.
16. Best exhibit from a distance of over 200 miles.
17. Best cactus or succulent in possession of one family for the greatest number of years.

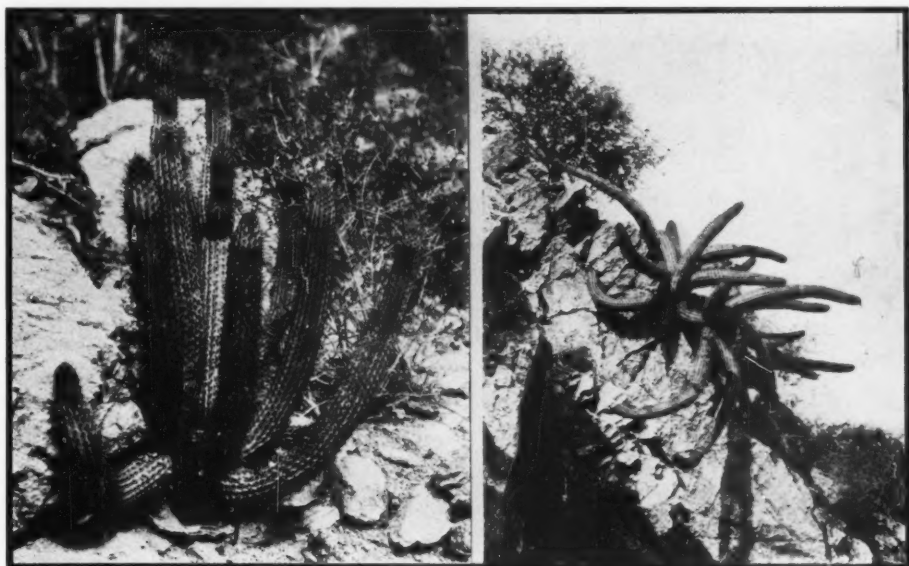


FIG. 1 and 2. Varying aspects of *Lemaireocereus littoralis* near Cape San Lucas.

INTERESTING THINGS IN LOWER CALIFORNIA

By HOWARD E. GATES

When one enters Lower California, Mexico, on a cactus hunting expedition, he soon finds himself in a maze of Chinese puzzles. The species are very variable, the descriptions often incomplete, and the described localities poorly located.

On Todos Santos Bay near Ensenada, one should find the red flowered *Echinocereus pacificus*. There are plenty of yellow flowered *maritimus*, but the *pacificus* always seem to be in hiding. I have never seen one or met anyone who has. It's the same story with *Echinocereus mamillatus*, which is said to grow on the hills near Mulege. The best Britton & Rose does on *Cochemeia setispinus* is to locate it somewhere in a circle forty miles across.

Along the coast from Cape Colnett, southward there is a small *Ferocactus*, my numbers 24 and 44, which does not appear to have a place on the list of recognized *Ferocactus*, unless it be *F. orcuttii*. The type locality for *F. orcuttii*, is given as "Palm Valley," which nobody seems to be able to locate. This little one along the coast doesn't quite measure up to the height of the described *F. orcuttii* and it has a yellow flower instead of a dull crimson flower. Yet when one considers Orcutt's remark that he considered it

was just a luxurious development of *Ferocactus viridescens*, it appears that this is probably the one he was talking about. In the same locality is an abundance of *F. viridescens*, but their growth is usually quite distinct. To increase the puzzle one occasionally runs across a specimen similar to No. 24, except it has hooked spines and a deep rose pink or red flower. This is in my collection simply as No. 23.

FIG. 3

Passing inland from Rosario, at the 30th Parallel, a really striking *Ferocactus* is encountered. It appears very much as a variation of the well known *F. acanthodes*, yet it is usually more slender and keeps a good red color in the spines after the plant grows large. The tallest plant I have seen reached between eight and nine feet. It doesn't fit any description by Britton & Rose. There are reports that the Germans are carrying this as *Californicus*. For the time being it appears best to carry this as No. 22.

Until less than two years ago it was impossible for a plant hunter to travel the length of the Peninsula except by mule, and only one expedition did that. It took them nearly a year to go one way. In places they had to travel very hurriedly on account of the lack of feed and water.

Many other botanists have landed at various points working the immediate vicinity. Sometimes their reports are only fragmentary as they did not observe the plants in a complete life cycle. Many of their discoveries were published in bulletins and books that have been long forgotten.

FIG. 1 and 2

An interesting example of this has just come to light. Last year on the coast at the very tip of the Peninsula I found a *Lemaireocereus* that could not be placed. This year I found many more of them and became convinced it was not touched upon in Britton & Rose's work. Two gentlemen who made a hurried trip to San Jose del Cabo this year, uncovered it and were so firmly convinced it was a new species, that they were going to write it up at once, though they had not seen the fruit or flower. At our Society's Show in Pasadena, a gentleman who had been rumaging in a second hand book store, appeared with Vol. II of Orcutt's "American Plants," published in San Diego, about twenty-five years ago. In it was a large paragraph, quoting an article published by Mrs. Brandegee about 1895, describing, locating and naming this plant as *Cereus littoralis*.

The same book upset my own complacency. Last year near Comondu and on the Magdalena Plain, I found what the natives call "Ciribe," and felt sure I had it identified as *Opuntia tesajo*, which Britton & Rose call a little known species. Orcutt's book gives enough additional

light on the subject to make it appear that my No. 95 is not *O. tesajo*, but that this name should belong to No. 120, from San Fernando and Punta Prieta, which I had been carrying as "*Opuntia ramosissima* type." If that proves to be correct what is No. 95? This last is a slender, branched, weak opuntia clambering up through small shrubs. It has plenty of sharp spines, an abundance of short, loosely jointed branches growing from the woody main stems. Early in the year it is covered with small red fruit, reminding one of *O. frutescens* from Arizona.

FIG. 7

Still speaking of Opuntias, on Magdalena Island, there appears to be an entirely undescribed cylindrical Opuntia, sparsely scattered over Mesa Santa Maria. When I first saw it I thought it was a strange *Cereus*. Then I got stuck and was suspicious as it hung on. Later I found the woody skeleton and a few heads bearing green fruit of the Opuntia type. The branches of this are larger than most "chollas," heavily spined, and of a purplish or plum colored general appearance, very much on the order of *Cochemiea halei*, which is found nearby. A suggestion has been made by one who saw the pictures, that this might be a *Grusonia*. No *Grusonia* is reported from Lower California. Plants were sent to the Blakesley Botanic Garden of the Santa Barbara Natural History Museum as No. 131. Specimens of most of my collections may be seen at this Garden.

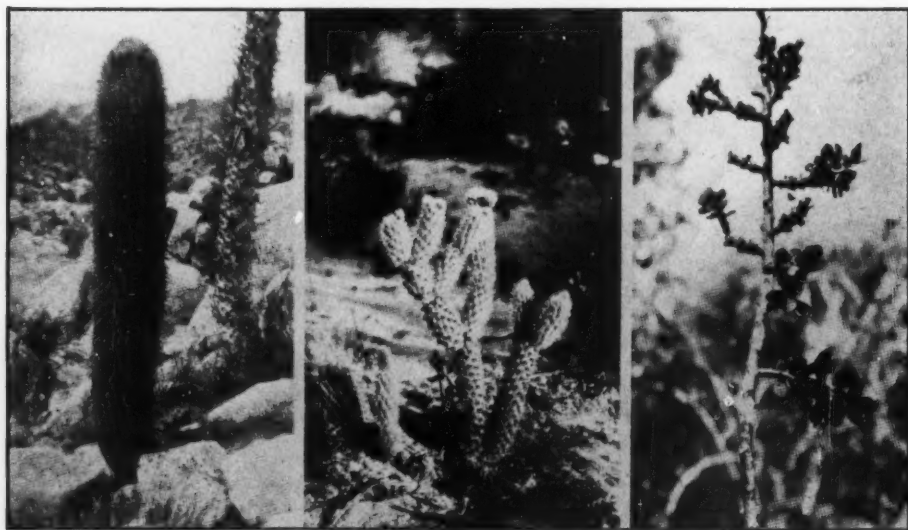


FIG. 3. *Ferocactus* "Californicus" 8 ft. high. *Idria columnaris* on right. Arroyo Jaraguay. FIG. 4. *Opuntia* Gates No. 148. Laguna Chapala. FIG. 5. *Peresklopsis* Gates No. 110. Partially stripped to show branches growing from fruit.



FIG. 7. *Opuntia Gates* No. 131. Magdalena Is.

In the same canyon that Mr. Baxter found *Neomammillaria phitaiana*, is another cylindrical *Opuntia*, that is not cylindrical, as the branches are all flattened. It grows in shady places, is quite tender and only a couple of feet high. Of the plants I imported, all I have left is the number 137. Uncle Sam's vacuum fumigator did away with the rest of this species.

In visiting in this neighborhood I wish to confirm Mr. Baxter's observation of *Neomammillaria phitaiana*, except he located it a little too far away from Todos Santos and I wish to goodness he would give his things a name we ordinary folks can spell and pronounce.

FIG. 8

Going on up from this canyon, thanks to a

clue from Mr. Baxter, I found a new flat jointed *Opuntia* growing away up among the pines and oaks of a little valley lying near the summit of the Sierra Laguna. It is the robust "Tuna Morada" which thrives in the high altitude. One only has to hang on to a mule's ears for about seven hours to get up and when it comes to climbing down, most of us pull leather for several miles. The joints of the *Tuna morada* are rather large, orbicular, thick and freely spined with strong white spines that stick out straight. The fruit is medium size of a reddish purple color with large irregular seeds.

FIG. 4 and 5

I've some other *Opuntias* staked out under number, but I suppose some day most of them



FIG. 8. *Opuntia "Tuna Morada,"* Sierra Laguna.

will be fitted into recognized descriptions.

Then there is the *Peresklopsis* west of La Paz, that I wrote about in the September Journal. I

found it again this year, but only in the same small spot. It is No. 110.

—Continued in August Journal.



Photo by W. von Roeder

NEOMAMMILLARIA PLUMOSA

By KARL O. FRICK

Neomammillaria plumosa (Weber) is entirely covered by a mass of white feathery plumose spines, that are weak and rub off easily when handled. Forms dense clusters up to four inches broad, the above photograph is of natural size, showing a plant eleven years old, grown from seed which are small and black; tubercles are small and somewhat woolly in their axils; flowers are white, but the plant does not flower only about once every five years under cultivation. Native habitat is Northern Mexico, and has been said to occur north of the border line in the United States, but no authentic report can be found.

Of all the cacti listed in the "Cactaceae" this is one of the very few that has no synonyms, but collectors and dealers have been busy with all of a dozen common names, and one hears it called everything from "Snow on the Mountain," "Featherball" to "Powderpuff." For a long time the plant was sold by dealers as *Mammillaria lasiacantha*, but the true *N. lasiacantha* which occurs in the lime hills of New Mexico is an altogether different plant, it being recognized as

one of the smallest cactus grown, and has no feathery spines.

Growing in city gardens, the white downy spines soon turn to a dirty gray, which greatly destroys the appearance and attractiveness of the plant. To overcome this I have devised a method which prevents this and promotes its growth. Simply place a glass jar of any kind over the plant, without allowing air to reach it; if you have a *M. plumosa* try this for a few months and note the change in whiteness of the spines and rate of growth.

Many members of the Cactus Society look with askance upon a grafted plant; some say it is nature faking, but to those that like grafts, this species is one of the outstanding plants for beauty when grafted on *Nyctocereus serpentinus*.

To the mealy bug, *N. plumosa* is just what it appears to be a feather bed, when he goes home-hunting in a cactus collection, and sees a *M. plumosa* he moves in without any further ado. He does not seem to take advantage of the comfort the plant offers him, for it appears that he never sleeps until his destructive appetite has killed the plant.

RHOPALOTA APHYLLA N. E. Br.

By N. E. BROWN

On Page 389 of Volume II of the CACTUS JOURNAL I described "A strange new plant" from South Africa and now there is in flower at Kew another that can only be placed under the same heading, and like the former is also from South Africa, which seems to have an inexhaustible supply of quaintly shaped plants. In the present case, as the sketch will show, the plant has nothing but its odd appearance to recommend it, for it is too small and its flowers too insignificant to attract attention, yet I do not hesitate to say that if a pot-full of this quaint little Crassulaceous plant were placed among a group of showy plants I believe every plant-lover would pause to look at it and probably make some remark about its unusual appearance. For it is less than an inch high and its stem and the few branches it bears are each of them a little club and quite leafless. Also it is very remarkable as being a succulent plant that is aquatic for it grows under water.

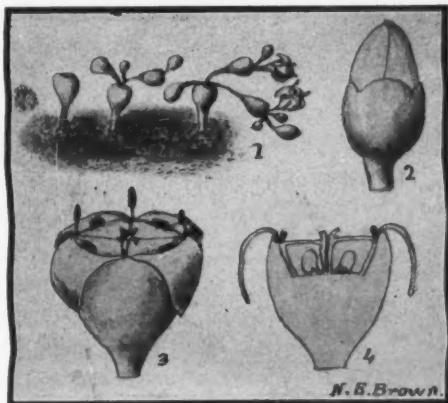
Living plants of it were brought to Kew by Mrs. M. R. Levyns and are now flowering. The account of it given by Mrs. Levyns is as follows: "On the voyage (to England) it produced a large crop of flowers, both pink and white. The Kew specimens came from the summit of the Tafelberg, the second peak in height (6500 ft.) in the Cederberg Range, Clanwillian District. The top of the Tafelberg is composed of horizontally placed sandstone, which is much fissured. At the bottom of these fissures rock-pools occur and the *Crassula* grows in these pools. When we visited the mountain in September the pools were fringed with ice and snow lay in sheltered places. The *Crassulas* were about nine inches under water; some were just beginning to produce flower-buds."

Another record of the plant was made by Mr. J. B. Cuthbert in April, when the plants were still submerged. "The Tafelberg, of course, is frequently covered with S. E. clouds during the summer months but I must confess that I was surprised to hear that water was still to be found in these pools at the end of summer. I assume that the flowers are produced when the pools are relatively dry, but I have no information on this point. It flowered with me when growing on damp sand." At Kew the pot in which the plant is growing is kept standing in a shallow pan of water, so that the soil is kept saturated.

This little oddity was originally described by

Schoenland and Baker as *Crassula aphylla*, but it differs from *Crassula* by being quite leafless, by the glands rising above the top of the carpels instead of being seated at their base, by the carpels being truncate at the apex instead of tapering into the very short style and by having only one ovule in each carpel.

The name is derived from the Greek, *rhopalotos*, club-like, in allusion to the shape of the stem and branches.



1. *Rhopalota aphylla*, natural size. 2, Flower-bud; 3, Flower; and 4, Section of Flower, all enlarged.

The following is a description of the plant:

Rhopalota aphylla. N. E. Br.

A very small aquatic succulent plant, quite leafless and probably an annual, consisting of a single, erect, clavate main stem 3 to 4 lines long and $1\frac{1}{2}$ lines thick at the top which is somewhat pear-shaped, with a minute central orifice at the apex, where it is sometimes faintly notched, glabrous, green. From the orifice arises 1 to 5 very spreading branches $1\frac{1}{2}$ to 5 lines long and like the main stem in shape. Each branch produces at its end in a similar manner 1 to 5 flowers about $1\frac{1}{2}$ lines in diameter. The parts of the flower are normally in fours or occasionally in threes. Calyx or the clavate body of which it forms part about one line long and three-fourths of a line broad, slight lobed; lobes $\frac{1}{4}$ line or less long, very broadly rounded and much broader than long. Petals recurved on the sides

of the calyx, $\frac{3}{4}$ line long, $\frac{1}{2}$ line broad, ovate, acute, white or pink. Stamens erect, alternating with the petals, about $\frac{1}{4}$ line long; anthers, at first red or dark red, becoming blackish; pollen yellow. Glands, dull reddish, opposite the petals and raised above the level of the top of the carpels, transversely oblong, truncate, brownish-orange. Carpels superior and free but sunk in the calyx-tube or clavate body so that their tops are nearly level with the tops of the calyx-lobes, opposite the petals, cuneately subquadrant in side view, convexly truncate at the top (they are represented rather too flat in the sketch), three-angled in cross-section, with the very minute style terminating the inner angle. Ovules solitary in each carpel (not 2 to 4 as Schoenland states).

Crassula aphylla, Schoenland and Baker, found in Journal Bot. 1898, 371, and in Ann. Bolus Herb. Vol. II, page 54, T.3, F.7, but this figure is from dried material and represents a piece of a totally different and leafy plant mixed with the *Rhopalota*, from which Dr. Schoenland has doubtless evolved the statement that this plant sometimes has leaves and it is quite probable that it was from this leafy plant he may have obtained carpels bearing 2 to 4 ovules, because all the carpels of two living flowers that I examined had only one ovule in each.

South Africa, Clanwilliam Division; Boontjes River, Schlechter 8665 (not 8664 as is wrongly quoted by Schoenland for that number belongs to *Pharnaceum pusillum*, Schlechter) and top of the Tafelberg, in the Cederberg Range, Mrs. Levyns.

EDITOR'S NOTE

This issue is rushed out in order to make notices of the San Francisco Show. We regret that Mr. West's article did not arrive in time for this issue. We would liked to have had his excellent article in this issue but we may look for a treat next month.

Letters like the following show how a late Journal disappoints our many readers. The Editor is handicapped since editing is 100% his hobby and not a business. We regret that a likelihood is necessary but we will try to avoid delays. This kind letter shows how much the Cactus Journal means to our friends:

Ste. Genevieve, Missouri.

Cactus and Succulent Society of America,
Los Angeles, Calif.
Gentlemen:

I am writing to ask why I have not received the Journal for June? I usually receive it promptly on the 19th or 20th of the month—and can scarcely exist from one month to the other waiting for it.

If for any reason the date of publication was changed, or any delay has occurred, just disregard this letter, but if the Journal was mailed as usual I would like very much to receive mine or to know what happened to it. It's a red letter day to me when it arrives.

Yours truly,
MILDRED RUTLEDGE.



Sansevieria

Who can match it on this coast?

Mrs. Lulie G. Smith of Salem, Massachusetts, a member of the Cactus Society sends the JOURNAL a photograph of a *Sansevieria zeylanica*, six feet high and of fifteen years' growth. The remarkable thing is that it is in bloom. Of it Mrs. Smith says:

"Recently two fine flower stalks developed that reached a height of 33 inches, the flower spike itself was 17 inches. Each little floret was about one and one-half inches long, of a beautiful cream tint and very fragrant.

"The blossoms were very prompt, for regularly each afternoon at 3:30 they began to open. There was great activity at that time among the buds. First the pistil of the little floret would show, then a slight tremor could be seen, and suddenly, as if a spring snapped, the petals were released and the blossoms opened.

"A small drop of nectar glistened like a diamond at the base of each cluster of florets. This drop seemed to increase as the flowers developed and could be seen running down the stem.

"The petals turned back like a lily and the center of the flower was so fine that the spike of bloom had a lacy effect. It was open every day for a week, closing each morning and reopening in the afternoon."

A Correction

Correcting the statement as to the meaning of the name *Agave carchariodonta* (Vol. II, page 489), the specific designation is derived from the Greek, and means: having sharp, jagged teeth. As the same root has been used for the generic name of a group of sharks, i. e., *Carchariodon*, the comparison should be with a shark's teeth, rather than with those of a crocodile.—E. W.



FIG. 9. *Pachyphytum chloranthum* sp. nov.—Habit of plant, in coll. of Mrs. Sheldon. App. x 0, 2.



FIG. 13. *Pachyphytum longifolium*, plant in coll. of V. Reiter, Jr. App. x 0.25.

GENUS PACHYPHYTUM

By ERIC WALTHER

All Drawings and Photographs by Author

No matter what may be the ultimate fate of some of the other genera in the CRASSULACEAE, *Pachyphytum* would seem to be sufficiently well founded for its permanent retention, notwithstanding the opinion to the contrary expressed by Bentham and Hooker in their "Genera Plantarum." Even in 1841, when the first species to become known was named *Pachyphytum bracteosum*, its distinctive character led to its establishment as a separate genus. There is certainly something markedly different, something massive and turgid, about the appearance of most of the species, that is well expressed by their generic name, which, in Greek, means "thick plant." The decisive character, of course, that makes recognition of the genus easy even by non-botanists, is the presence of the queer, scale-like appendages, found on the inner surface of the petals, near the base of the epipetalous (*1.) stamens.

(*1) : *epipetalous* : borne on the petals, see photo No. 11.

Formerly some doubt existed as to the invariable presence of these organs in the genus, since *P. amethystinum* Rose was described by its author as lacking appendages. The generic assignment of this was considered as provisional by even Rose himself; and the recent flowering of this species in the collection of our friend and collaborator James West has settled quite definitely that, in spite of the remarkable similarity in foliage, this is not a *Pachyphytum* but more properly belong into the genus *Graptopetalum*. We expect to discuss this matter more fully in the near future.

Just what may be the function of these peculiar scales remains uncertain, but they do not seem to be organs of secretion. Very likely they are designed to make difficult the access to the inside of the flowers of unwanted insects. To assure cross-fertilization, so important for the continued vigor of the race, the flowers of this genus have become specialized to the extent of requiring the intervention of an insect of a cer-

tain size, or length of proboscis. To attract these, honey is secreted by the honey-glands located at the base of the carpels, which must be protected against interlopers; a purpose these scales would

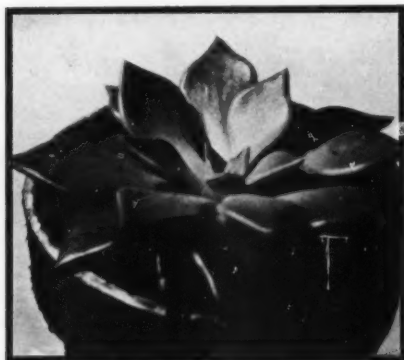


FIG. 12. *Pachyphytum chloranthum* sp. nov.
—Rosette; app. x 0.7.

seem to fulfill admirably. We here have a striking instance of the adaptation of flowering plants to pollination by one or a few particular insects. Such high development of entomophily (*2) may perhaps be taken to indicate an equally high stage in the scale of evolution, as well as the relatively recent origin of the genus. Curiously enough, most authors speak of these scales as staminal appendages, whereas they are most clearly outgrowths of the petals; and probably represent an extreme development of the upper rim of the honey-cavity found within the base of the petals of most *Echeveria*-species.

As circumscribed today, the genus *Pachyphytum* includes *Diotostemon* of Salm-Dyck, recognized as a Section by Berger. This section differs from *Eu-Pachyphytum* in its smaller sepals and bracts. The species described as new below seems anomalous in having widely-spreading sepals, and in other ways so greatly resembles *Echeveria* as to lead us to suggest the erection of Section *Echeveriopsis* for its reception. Exclusive of *P. amethystinum* Rose there are 7 species in the genus, to which we add another, all of which are probably Mexican. The nearest affinity of the genus is most likely *Echeveria*, whose Section SECUNDAE approaches it quite closely in many respects.

As a consequence of the ease with which detached leaves take root, the most commonly grown species is probably *P. compactum* Rose. Somewhat less common, but well deserving of a place in all collections, is *P. bracteosum*, culti-

vated to perfection at the Huntington Botanic Garden. This applies equally well to *P. hookeri*, perhaps better known as *P. aduncum*. *P. longifolium* also is known to us from the fine collection of Mr. Hertrich at San Marino, and greatly resembles *P. bracteosum*. Two of the species known to science appear to be still lacking here. They are *P. oviferum* and *P. brevifolium*, and appear well worthy of an effort directed towards their introduction. Aside from these true species several bigeneric hybrids are cultivated locally. *Pachyphytum bracteosum* particularly seems to be prone to hybridization; and crosses most readily with almost any *Echeveria* happening to be in flower simultaneously. Our friend Orpet of Santa Barbara has recently raised quite a lot of such bastards, to the future confusion of botanists who may be tempted to agree with Lindley that this is going too far. In the past various such hybrids have received Latin names, some of which are well known here. In so far as they possess the characteristic petal-appendages they are included in the appended key, even though

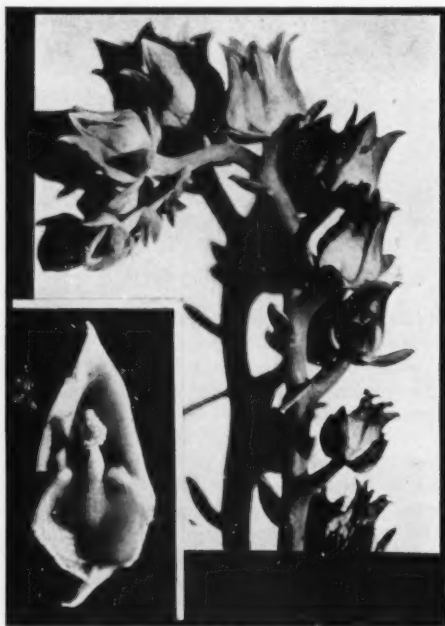


FIG. 10. *Pachyphytum chloranthum* sp. nov.
—Inflorescence, app. x 1.5.

FIG. 11. *Pachyphytum chloranthum* sp. nov.—Inner surface of corolla-segments, showing the scales characteristic of the genus; app. x 4.

they do not really belong into the genus *Pachyphytum* proper. At some future time we hope to discuss these more fully, and for the present

(*2) : entomophily : the love of insects.

content ourselves with listing them under the name of *Pachyveria* Haage & Schmidt, wherever they are hybrids between *Echeveria* and *Pachyphytum*. For the well known hybrid *Echeveria clavifolia* we would suggest the compound name *Pachyranthia*, as this is the result of crossing *Pachyphytum* and *Courantia*.

Culturally, the various forms require the same treatment as suits the more tender species of *Echeveria*, which is to say, they will thrive in any good garden soil providing it is well drained. Being largely indigenous to parts of Mexico having summer rains, they will appreciate adequate moisture during their growing season. In the course of our studies numerous references were found as to the occurrence of *Echeveria* on limestone, which may well hold good also of *Pachyphytum*, and should constitute a useful hint to our growers. Propagation is usually best accomplished by rooting leaves or bracts of the flowering stem. Care should be taken to remove these with the basal, axillary bud intact, or they may well take root without ever growing any further. Seeds are easily grown if available, but are not to be recommended if plants true to name are desired.

Of pests the most serious seems to be the ubiquitous Nematode. We are sceptical about any of the suggested remedies, and feel that prevention is the only cure. Any newly acquired plant should be carefully examined for any suspicious rootswellings. If such are found, it is better to

cut off all roots and reroot the plant than to take any chance of infesting the soil still clean. Of course the infested roots and attached soil should promptly go into the fire. Sometimes the flowers are spoiled by Aphis, probably *Aphis gossypi* Glover. Timely and repeated spraying with either Nicotine or Pyrethrum-extract should control this. Mealybugs are occasionally troublesome; and since the commonly advised oilsprays are injurious to many succulents, a rather strong dose of Pyrethrum-extract might prove safer. A final solution of the mealy-bug problem is promised by the newly introduced and very successful internal-parasites, *Coccophagus gurneyi* H. Compere being especially effective in the writer's experience.

The new species described herewith was found flowering in the collection of Mrs. Sheldon, one of our San Francisco members, who obtained it in El Paso, no further information being obtainable in spite of repeated efforts on her part. It is probably a native of Mexico, just like the rest of the genus. Some external similarity to *Echeveria strictiflora* led us to have the type of the latter at the Gray Herbarium examined for the presence of the scales, by the courtesy of Mr. Ivan Johnston, whose findings were wholly negative. The recent introduction of the latter species removes all doubts in the matter. The name here adopted has reference to the striking color of the corolla, it meaning "green-flowered" in Greek. The new species differs from all others known in its wide-

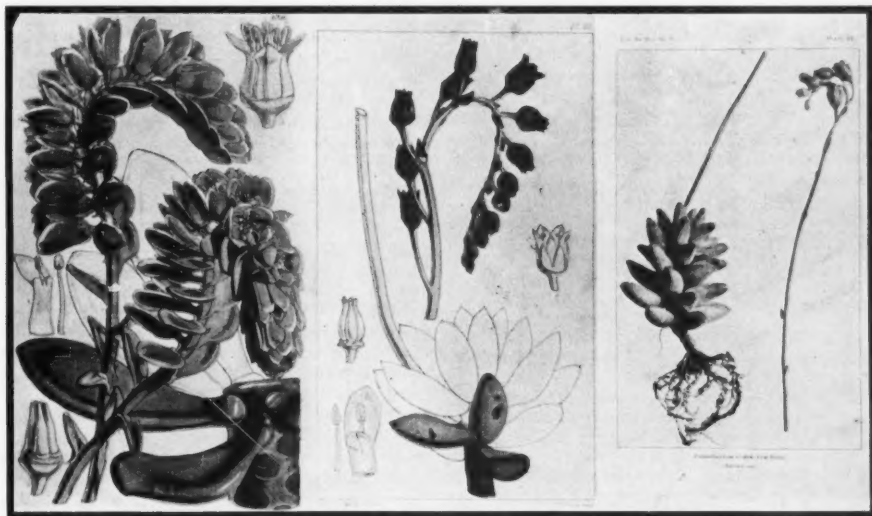


FIG. 14. (Left) *P. bracteosum*—Reproduced from "Botanical Magazine," plate 4951. x 0.5.

FIG. 15. (Center) *P. bookeri*—Reproduced from "Saunders Refugium Botanicum," plate 60. x 0.5.

FIG. 16. (Right) *P. compactum*—Reproduced from "Contr. U.S. Nat. Herbarium," Vol. 13, plate 61 x 0.5.

ly spreading sepals; and the shape and color of the leaves also would seem to be distinctive. The readiness with which the plant may be increased vegetatively presages an early and wide distribution, at least locally, and under the circumstances it appears advisable to promptly furnish the new arrival with a name.

The first flowers were produced in August, 1930, in the collection of Mrs. Sheldon, San Francisco. The type is deposited in the herbarium of the California Academy of Sciences, San Francisco. All drawings and photos are the author's. In closing we wish to express our thanks for the unselfish co-operation of the discoverer, both by calling the matter to our attention and supplying us most generously with flowering material and young plants.

PACHYPHYTUM Link, Klotzsch & Otto, Allg. Gartenztg. 9:9; 1841.

" Rose North Am. Flora, 22:1:11; 1905.

" Berger, Engler-Prantl, 2nd Ed. 184:482, 1930.

Diotostemon Salm-Dyck, Allg. Gartenztg. 22:265; 1854.

Cotyledon Baker, Saunders Refugium Botanicum, Vol. 1. 1869.

Echeveria Auct. (Lindley, Morren, Otto, Berger, etc.)

Generic character: (Family CRASSULACEAE, Subf. ECHEVERIOIDEAE.)

Plants succulent; leaves alternate, mostly rather thick, rosettes often lax. Inflorescence lateral, secund-racemose, upper bracts sometimes very large; stamens 10; corolla-segments 5, erect, united at base, each with two scale-like appendages at base of epipetalous filament; carpels many-seeded, with hypogynous scales conspicuous. **TYPE-SPECIES:** *P. bracteosum*.



FIG. 1. Ripe follicles of *Pachyphytum bracteosum*, x 3.

List of species, synonyms, etc.

Pachyphytum aduncum (Baker) Rose: *P. bookeri* (Salm.) Berger.

* " *amethystinum* Rose: *Graptopetalum amethystinum* (Rose) new combination.

* " *bracteosum* Link, Klotzsch & Otto. Mexico.

" *brevifolium* Rose. Guanajuata, Mexico.

* " *chlорanthum* new species. Probably Mexican.

* " *compactum* Rose. Ixmiquilpan, Mexico.

(*cultivated locally.)

Pachyphytum

* " *bookeri* (Salm) Berger. Mexico. (*P. aduncum* Rose, *Cotyledon aduncum* Baker, *Diotostemon bookeri* Salm-Dyck.)

* " *longifolium* Rose. East. Mexico.

* " *oviferum* J. A. Purpus. San Luis Potosi, Mexico.

* " *pachyphytoides* (L. de Smet). *Pachyveria pachyphytoides* new combination.

" *sobrina* Berger; *Pachyveria sobrina* (Berger) new combination.

" *sodalis* Berger; *Pachyveria sodalis* (Berger) new combination.

PACHYPHYTUM CHLORANTHUM sp. nov.

Planta subcaulescens, foliis fusce-viridis, rosulatis-confertis, carnosis, rhomboidis-oblancoelatis, acuminatis, in basin sensim angustatis, supra planis, 4-7 cm. longis, 15-25 mm. latis, scapis lateralibus, excelsis, circa 45 cm. altis cum inflorescentia; bracteis congestis infimis, oblancoelatis, acuminatis, crassis, 15-20 mm. longis, racemis in apicem cernuis, floribus 8-15, breviter pedicellatis, calycislaciniis valde patulis, inequalibus, ovatis-deltoidis, corollis brevioribus, corollis urceolatis, antea viridis, deinde rubilaciniis intus distincte cucullatis bilobis.

PLANT glabrous;

STEM evident, but often short, to 6 cm. tall;

ROSETTES dense, with 25 or more

LEAVES; these 4 to 7 cm. long, 15 to 25 mm. broad and 2 to 3 mm. thick, flattened above, rhomboid-oblancoelate, acuminate, at base narrowed to width of 3 to 4 mm., color above dull yellow-green tinged red when young, beneath asphodel-green;

INFLORESCENCE one or more to the rosette, of remarkable height in comparison to size or rosette, to 45 cm. tall, lateral;

PEDUNCLE stout and erect;

LOWER BRACTS numerous, distinctly congregated on basal part of peduncle, ascending to appressed, to over 2 cm. long, oblancoelate to obovate-oblong, acute to obtusish, colored as the leaves but more reddish at base, readily detached and rooting;

RACEME secund, simple, to 15 cm. long, at first nodding, later erect, with 8 to 15 or more flowers;

UPPER BRACTS colored as the lower, but smaller, more remote, oblong, thickest near base, recurved;

PEDICELS stout, about 3 mm. long;

SEPALs spreading at nearly a right angle to corolla, ovate-deltoid, thick, acute, unequal, the longest nearly 5 mm. long;

COROLLA urceolate, sharply pentagonal, to 10 mm. long by 8 mm. in diameter near base and at mouth, glaucous, in bud pale green, only with age turning dull pink or red;

COROLLA-SEGMENTS united at base, oblong-lanceolate, acuminate, spreading at tip, on back keeled or angled, within distinctly appendaged at base of epipetalous filaments; these

APPENDAGES very thin, deltoid-oblong, obtusely rounded at apex;

STAMENS 10, the epipetalous filaments short, thick and broad at base;

CARPELS erect, at first whitish with green tips, later becoming wholly green;

STYLES short, greenish;

HYPOGYNOUS SCALES white, transversely semicircular.

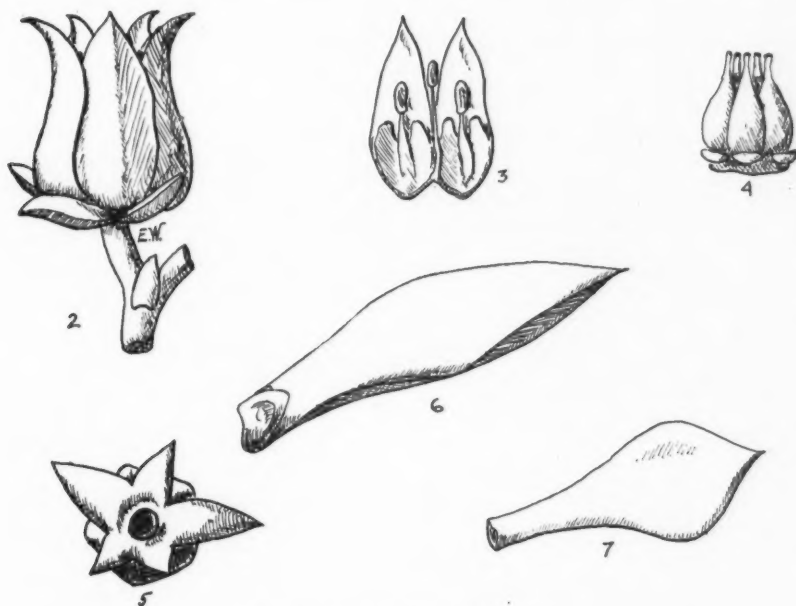
*Pachyphytum chloranthum* sp. nov.

FIG. 2. Side-view of corolla, x 3.

FIG. 3. Inner surface of 2 corolla-segments, showing the scalelike appendages, x 3.

FIG. 4. Carpels, x 3.

FIG. 5. Calyx, bottom-view, x 3.

FIG. 6. Lower bract, x 3.

FIG. 7. Single leaf, x 1.

PACHYPHYTUM:**Key to the species; and hybrids with scale-like appendages***

A. Sepals appressed to corolla.

B. Sepals large, as long as or longer than corolla; bracts large, at first closely imbricated (EU-PACHYPHYTUM.)

C. Leaves distinctly flattened.

D. Inflorescence forked; bracts pointed; petals pale red . . . *Pachyveria pachyphytoides* n. c.

DD. Inflorescence a simple raceme; bracts obtuse.

E. Leaves over 7 cm. long and over 25 mm. broad; flowers 10 to 18;

petals bright red *P. bracteosum*.EE. Leaves not over 6 cm. long, narrower; flowers 3 to 6; petals dark red . . . *P. longifolium*.

CC. Leaves almost terete.

D. Leaves 1 to 2 cm. long; sepals nearly equal, 6 mm. long *P. brevifolium*.DD. Leaves 2 to 4 cm. long; sepals unequal, the longest 15 to 18 mm. long . . . *P. oviferum*.

BB. Sepals smaller, shorter than petals; bracts smaller (DIOTOSTEMON.)

C. Petals without appendages. (*3.)

CC. Petals distinctly appendaged at base of filaments.

D. Flowers solitary *P. uniflorum*.

DD. Flowers 6 or more to each raceme.

E. Leaves flattened, to twice as broad as thick.

F. Leaves to 9 cm. long and 35 mm. broad; inflorescence branched;

pedicels 7 mm. long *Pachyveria sodalis* n. c.

FF. Leaves 45 mm. long and 10 mm. broad; inflorescence simple; pedicels

10 to 12 mm. long *Pachyveria sobrina* n. c.

EE. Leaves nearly as thick as broad, sessile.

F. Leaves crowded, 20 to 25 mm. long; flowers 8 mm. long *P. compactum*FF. Leaves not crowded, to 4 cm. long; flowers 13 mm. long *P. bookeri*

AA. Sepals spreading at almost a right angle to corolla; leaves acuminate, dark green.

(ECHEVERIOPSIS new Section) *P. chloranthum* sp. n.(*3: Here would come what was formerly known as *Pachyphytum amethystinum*, which must now go into *Graptopetalum*. A number of bigeneric hybrids may also be looked for here, having flowers much like *Pachyphytum*, but without the characteristic petal-appendages, as for instance *Pachyranthus clavifolia* new comb.)

An Introduction to the Study of Cacti

By JACOLYN MANNING, M.D.

Sub-Tribe IV. Echinocactanae. Genera 28

1. DENMOZA. Species 1 *D. rhodocantha*, better known as *Pilocereus erythrocephalus*, at first globular but becoming columnar in form, is characterized by a peculiar mass of white wool, near base of flower tube on the inside; the slender red bloom shows stamen and style escaping from its closed tip.

2. ARIOCARPUS. Species 3. These "beautiful little rock bodies" are found in the Big Bend district of Texas and in North Central Mexico. Their ground surface of fissured triangular tiling resembles the weathered limestone of their arid habitat with a mimicry as clever as that of the "stone-faces" on the gravel beds of South Africa. Botanical curios, one of them, *A. kotschoubeyanus*, is said to have paid in gold its passage to Europe a century ago, a princeling having given one thousand francs for its possession. *A. fissuratus* which is known as "star rock" and "living rock," is the most decorative of the group, embossing the ground with a rich pattern of neutral tints which show an underlay of green after showers. The body is a thick, fleshy root-stalk; the horny imbricated crown is made up of overlapping triangles of porous tissue; this tissue permits and regulates the imbibition of dew, the only moisture accessible in a limestone desert of "terrible heat!" Areoles filled with hair, but no spines, develop in grooves on the warty surface of young tubercles; white and lavender flowers appear near center of plant, and are succeeded by pale green oval fruit; the tiny seeds are black and rough, with a proportionately large scar or hilum; *A. retusus* is recognized as a unique beauty and has been given the early name of *M. prismatica*, bears an erect rosy flower.

3. LOPHOPHORA. Species 1 *L. williamsii*. "Key to the glories of another world," the amazing kick registered by this bland appearing little vegetable secured for it the premiere description in the Kew Gardens cactus book, and landed it in the pages of the Atlantic Monthly.* Known as the "sacred mushroom," its appearance and qualities may be deduced from the folk-names "mescal button" and "dry whiskey." Small, round, blue-gray-green, occurring singly or in multiples, with a thick taproot, its pale pink flowers appear at irregular intervals on or near center of its slightly concave top. Delicate linear

indentations outline the broad flat ribs, which are crested at intervals with tufted areoles. This demure little cactus grows in isolated colonies on the hillsides of the Big Bend country of Texas and across the border in Mexico. Planted in sandy soil, and protected from the sharp beaks of birds looking for a tippie, it thrives in our Pasadena garden, a most distinguished addition thereto. The alkaloids contained in *L. williamsii* are stimulant, first to the optic nerve producing visions of exquisite color, and then, apparently, to adjacent frontal lobe areas, contacting memory and conscience. Narcosis is induced, and native tradition avers its value when used in cases of pulmonary hemorrhage. It has had prehistoric use in Indian religious ceremonial, and although proscribed by law, is still used in native neophyte initiations.

4. COPIAPOA. Species 6. Coastal plains and hills of Chile. These globular or cylindric cacti, formerly listed with the *Echinocacti*, bear fine dense wool on their apices, in which appear the yellow flowers. Dr. Rose, working out from Antofagasta, in 1914, collected these plants and sent fine specimens to the New York Botanic Garden.

5. PEDIOCACTUS. Species 1. It is a long hop from the coastal plain of Chile, home of the last mentioned species, to Butte Valley, in the Utah desert, where *Pediocactus simpsonii* has its habitat, yet classification indicates some botanical relationship. *P. simpsonii* is globular in shape, with contiguous tubercles borne on spiraled ribs, the rosy flowers massed in center of top enclosed in a woolly rug. The dull black seeds are keeled on the back, which helps to identify the several varieties occurring throughout a wide range. It is interesting to know a dried specimen of this cactus containing seeds was sent to Kew Garden in 1846, from which seedlings were successfully raised. They called it a *Melocactus* because of its woolly top; the collector, Charles Geyer, was told its true habitat was at "Priest's Rapid, a rocky island in the Columbia River, about 60 miles above Fort Walla Walla."

6. TOUMEYA. Species 1. *T. papyracantha*. We first saw this remarkable paper-spined cactus in the collection of Col. Perrie Kewen, at the first annual exhibit of the Cactus and Succulent Society. The small ovoid stem, with spirally arranged tubercles, caused Engelmann to change his own classification from *Mammillaria* to *Echinocactus*. The new generic name was given by

*See November, 1929, issue Atlantic Monthly.

Britton and Rose in honor of Dean J. W. Toumay, a student and collector of cacti. The stem is not otherwise remarkable. The spines, however, and the lanceolate scale of the perianth tube, expand into "thin, flat, shining, flexible, papery spears," which might have been cut from a single silvery-gray layer of a hornet's nest. Such a fabric-making plant, according to its name, should grow in the Calico Mountains of California, but its chosen home is in New Mexico, and its type locality "between the lower hills near Santa Fe." (Britton & Rose, Vol. III, p. 92.) *T. papyracantha* is a curious and very rare cactus; it should not be confused with *O. papyracantha* Phil. which is found in West Argentine and also bears papery spines, and is listed by Berger as *O. diademadata*.

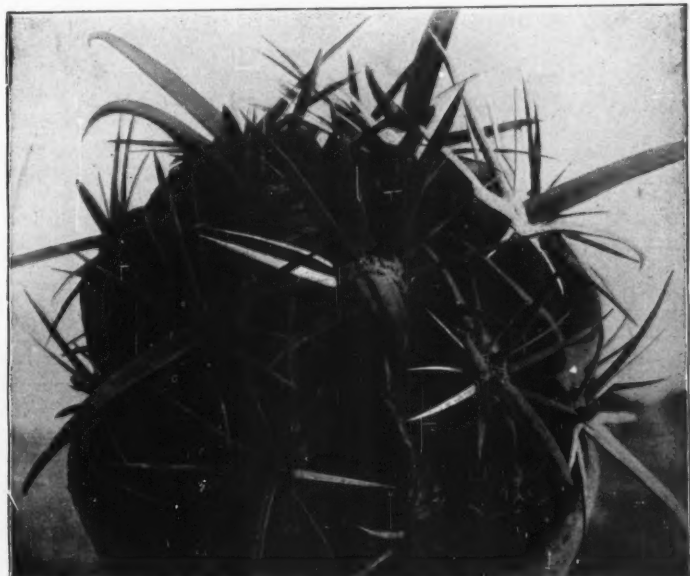
7. EPITHELANTHA. Species 1. *E. micromeris*, the so-called button cactus of West Texas and Mexican Border may appear singly or as a close cluster. Small and globose, it has been differentiated from the *Mammillarias* by the placement of the flowers which appear in a tuft of wool on the areolar tip of new grown spirally arranged tubercles. Ellen Schultz, author of "Texas Cacti,"

reports the bloom as flesh-colored, with scarlet, acid, edible fruits.

8. NEOPORTERIA. (Br. & R.) Species 7, are described, with expectation of finding more. The genus is named for Carlos Porter, a well-known entomologist of Chile. Again we must make the long jump from the Rockies to the Coastal Plain, foothills and mountains of Chile, to view this cactus group next in botanical relationship. These short-cylindric plants, which may be erect or sprawling and are more or less hairy at the crown where the short funnel-form showy flowers of pink, white, or yellow appear, bear wool on the scales of the ovary. *N. occulta*, as one might surmise from its name, is the most striking in appearance, for the areoles with their blackish spines appear to be countersunk in the rhombic chinned tubercles.

9. AREQUIPA. (Br. & R.) Species 2. From Chile and Peru.

10. OROYA. (Br. & R.) Species 1 *O. peruviana*, with a tri-colored flower, found in the High Andes of Central Peru, associated with *Opuntia floccosa*.



Ferocactus latispinus

Ferocactus latispinus Haworth has a wide distribution throughout Mexico, but has never been found north of the border, has a rose to purple flower 2 to 3 inches long, which opens daily for 4 or 5 days successively, flowers from early in May to about mid-summer, when they are more readily seen, as this plant has the habit of concealing itself, by nestling under a sheltering bush, weeds, or grass. *F. latispinus* so closely resemble the flat spined *F. viridescens*, growing so plentiful in San Diego County, California, that only those very familiar with both species are able to tell one from the other, yet there is a marked difference in appearance of the mature plants; *F. latispinus* becoming somewhat elongated, while *F. viridescens* always remains globular. Most of the old time collectors of cactus will not recognize this name, as this plant is widely known to them as *Echinocactus corniger* or *Echinocactus cornigerus* which are treated as synonyms today.



Echinomastus unguispinus

11. MATUCANA. (Br. & R.) Species 1 *M. haynei*. "In color, shape, and size the flowers resemble those of species of *Borzicactus*." "The long, slender scarlet flowers make it a very desirable plant for cultivation."

12. HAMATOCACTUS. (Br. & R.) Species 1 *H. setispinus*. This Texas cactus is known in its home state as "twisted rib," and to collectors as *Echinocactus setispinus*. Its range is from the Brazos to the Rio Grande and across the Border into Mexico. It is characterized by a long central spine conspicuously hooked, and by its yellow, red-centered flowers which bloom throughout the season. It is hardy and adapts itself readily to cultivation if provided with good drainage.

13. STROMBOCACTUS. (Br. & R.) Species 1 *S. disciformis*. Central Mexico.

14. LEUCHTENBERGIA. (Hooker) Species 1 *L. principis*, was found by Dr. C. A. Purpus in Coahuila, Mexico, in an almost "inaccessible desert mountain range." This chunky vegetable has a broad taproot and stem from which arise the long squared tubercles. The tubercles, woolly in their axils and bluish-green, are tipped with areoles bearing long, thin, slender papery spines. The handsome flowers are large, yellow, funnel-form campanulate. "In appearance this plant is unlike any of the other cacti, resembling an aloid plant with stems like those of some cycads."

15. ECHINOFOSSULOCACTUS. (Lawrence.) Species 22 or more.* All native of Mexico. Small plants usually characterized by many thin and wavy ribs, with numerous clusters of strongly flattened and ribbon-like spines which are appressed or incurved. *E. violaciflorus*, sheathed in ribbon-like spines, is handsomely shown in color, "Cactaceae," Plate XXIII, page 208, Vol. III, Britton & Rose.

16. FEROCACTUS. (Br. & R.) Species 30, all from North America.

17. ECHINOMASTUS. (Br. & R.) Species 6, "closely interrelated, and resembling *Coryphantha*," found along Mexican Border.

18. GYMNOCALYCIUM. (Pfeiffer.) Species about 23, all from South America, east of the Andes. The members of this cactus group are characterized by chinned tubercles and naked flower buds as well as dome-shaped brown seeds. Medium in size, globose, strongly ribbed, the ribs divide into tubercles which are enlarged and protrude just below the spine-areole. By their chins they are known, and may be referred to this genus for identification when out of flower. The campanulate flowers, which are large for size of plant, have a color range of white, pink, and rarely yellow. The broad scales of the flower tubes of *G. platense* and *G. schickendantzii* are

*Page 481, Cactus Journal, Vol. II, No. 11.

tinted with blue which deepens to purple at the base, while the white bloom of the former when open shows a broad purple throat. This plant genus has its native home in North Argentine, Paraguay, and Uruguay; in Brazil is found the even more attractive *Echinopsis* group with fragrant flowers shaped like trumpets, long and

delicately colored; the collector who specialized in either or both of these groups could house his collection in a comparatively small space, have a unique window garden, be assured of a rapid increase by growth of offsets, and harvest fragrance, and beauty in line and color during an extended season of bloom.



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By MARY NORWOOD LAWRENCE
Assistant Editor

376 N. Ave. 57, Los Angeles, Calif.

N. E. Brown, that wonderful old man of Kew and the Mesembrianthemums, will publish a book this summer on the stemless groups of Mesemb. There are to be over 100 photographs and colored plates with descriptions in English, Dutch and German, and will no doubt be of interest to the many American lovers of succulents.

Miami, Florida, is moving up into the cactus ranks. Harry S. Frear, formerly of Los Angeles, has moved across the continent and established an export business which he claims is far above his expectations. He is specializing in the succulent plants native to Florida and the South.

A dinner, tendered to W. A. Manda by the New Jersey Florists' Association recently, was a testimonial to a man to whom was due in large measure the popularity of Cacti and Succulents on the Eastern coast. Mr. Manda was born in Prague, Bohemia, (now Czechoslovakia), of a forester's family and served as a horticultural apprentice. While still in his teens he spent two years each in Vienna, London and Paris, perfecting himself in his chosen profession, and then came to America. Almost immediately he became Curator of the Harvard University Botanical Gardens, and years afterward started in business for himself in South Orange, N. J., where he still operates. For over a half-century he has held high the light of horticulture, shedding its brilliance throughout the broad lands of America.

J. W. George, once a poultryman of Petaluma, has turned from feathers to spines and is now busy with a real hobby—a Cactus Garden. A recent trip to the desert started him on his way and a visit to the U. S. Plant Gardens at Chico further increased his pace, until now Mr. George finds himself grafting and propagating in his own green house, which is every amateur's goal.

The "Patch's" mail includes a letter from Mr. Chas. Steinway, of the famous firm of piano makers of New York, one paragraph of which reads: "My small collection consists of about 200 plants of both cacti and succulents which I winter in a glassed-in piazza facing south and in summer I sink the potted plants in a raised bed of rocks and sand out of doors."

Miss M.C. Karsten of Gelderland, Holland, registers surprise on seeing a photograph of Dr. Houghton, R. E. Willis, and G. A. Frick. Where was the Wild West atmosphere—sans sombrero, sans chaps, sans forties. One of these three gentlemen also expressed amazement at viewing a picture of Miss Karsten without wooden shoes, large hips and a little granny cap.

An article on Cacti in "New Jersey Gardens" written by Otto H. Roller of New Milford is a revelation to us Westerners of what really does grow outdoors there all winter. He also gives the location of the one opuntia native to New Jersey, *Opuntia compressa*, and describes its habits and appearance.

Arturo F. Moeller of San Pedro, Coah., Mexico, writes to inquire if the United States Department of Agriculture permits seeds to be sent to this country without special permit from Washington. Yes, indeed, Mr. Moeller, if they are not sent in pulp. See C. P. for May, 1931.

Herman Tobusch of Villa Park, Illinois, is doing great work for the Society, in the vicinity of Chicago, his activities having already brought in several new members. He was formerly president of the Cactus Club in Freiburg, Germany, and is entirely familiar with both cactus and succulents. Thus it is not a far cry to the establishment of a branch Cactus Club, which Mr. Tobusch has in contemplation in Chicago, and which will be affiliated with our Western order, and receive the JOURNAL.

Six colored prints of cacti and succulents were received by the Librarian from Friedrich Adolph Haage, Jr., of Erfurt, Germany. These are the finest color engravings of cacti yet seen. Mr. Haage seems to have the knack of doing things just a little better than the other fellow, and these pictures show unusual workmanship and color. Price of six pictures is \$1.00.

Secretary G. Van de Weghe writes that the Queen of Belgium is greatly interested in cactus and succulents and expressed a desire to receive the Belgium Society magazine. A committee of the society has been appointed to present some specimens of cacti to the Royal collection.

In April, 1933, an international flower show will be staged at Ghent by the Societe Royale de Botanique; a separate department will be allotted for cacti and succulents. Members of the Belgian Society are planning exhibits, and ask that the members of the Cactus and Succulent Society of America plan on sending plants either as individuals or as a Society.

SUKKULENTEN—is a recent book by that veteran of succulent collectors, Wilhelm von Roeder of Germany. Elaborately illustrated and with a wonderful series of photographs, Dr. von Roeder gives the general reader a comprehensive account of all the succulents and how best to look after them. A cleverly graphic map of Africa shows the location of the various districts in which the different succulents of that country grow. Although printed in German the text is easily translated and is full of useful information.

At a recent meeting of the Field Naturalists' Club of Trinidad, Port-of-Spain, W. E. Broadway, one of THE JOURNAL's most enthusiastic supporters, gave an instructive talk on "Cacti." Only about 14 different kinds of cactus are known in that island and the majority of the people consider them useless and worthless which isn't an incorrect contention—but so is a Zinnia. Mr. Broadway went from England to the British Lesser Antilles many years ago to take charge of the Trinidad Botanic Gardens and has been there ever since.

One glance at the cosmopolitan character of the items in the Patch is sufficient refutation of a recent jibe at sectional feeling. If articles are received and are of interest to our readers, no matter from what part of the country the farther apart the better, we are glad to publish them.

EDITOR'S NOTE: If you have something of interest for The Cactus Patch please communicate with Mrs. Lawrence or, better yet, visit her garden. You might be able to purchase a six foot *Cereus* or some succulents which she states are now for sale.

THE CACTUS AND SUCCULENT SOCIETY OF AMERICA

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OUR NATIVE CACTI—by Ethel Bailey Higgins—170 pages, cloth, A. T. De La Mare Co., New York, 1931. \$2.50.

Pleasant reading to the old time cactus lover. Not a line in it about succulents! Moreover, every amateur who is wondering where to begin in the study of cacti will find the dotted line pointing to the right direction. In Mrs. Higgins' book. None has ever generalized with such lucidity. Without being technical, one can find the family in the table of contents, go out into the garden with the book, look at the illustrations (which are many and illuminating) and spot the plant.

Another helpful trait about this book is that it is printed in English. The mass of literature on the subject of cactus is in greater part confined to other languages, and while it might be simple enough if translated, some of the most valuable contributions are thus lost to the tyro. In classification the author follows Britton and Rose in their Cactaceae, as they are the only available authorities in the English language, and she has made every endeavor to be exact in the use of names. The spelling is according to "Standardized Plant Names."

To the average person the word Cactus brings vaguely to mind the Prickly Pear—the one manifestation of this spiny vegetation which everyone recognizes, from Newfoundland to Florida, and from British Columbia to Mexico. The present popularity in America of cactus culture seems to be based on something more enduring than passing fancy, although in Europe there has existed for over a century a consistent effort toward the collection and culture of the Greek "Kaktos—a prickly plant."

Today, there are still those "Doubting Thomases" who question the cultivation of cactus as other than a fad. But, if fad it is, it has become so stabilized as to be part of every garden equipment, whether the gardener know aught of its needs or not. This is one of the values in Mrs. Higgins' book—to tell this amateur garden-maker these needs of a plant that may grow without water under the hottest sun, in the poorest soil, but which will surely respond more quickly and generously to a little care than any other bit of vegetation.

No stilted, categorical language, "Our Native Cacti" reads along easily, chattily, smoothly as one talks. An inspiration and answer to the beginner in the cactus field. Bits of romance, the common names, snatches of history in our Southwest, economic uses, decorative values are to be found therein. Chapter VI, "Questions and Answers," is an Encyclopedia in tabloid. The Reviewer gives it a well-thumbed place on her shelf of Cactus Literature. MARY NORWOOD LAWRENCE.

Cactus Botanical Garden

Helen McCabe of San Diego expressed the hopes that eventually some cactus lover might donate property for a headquarters and botanical garden for the Cactus Society. There are a great many who would be pleased to contribute plants for such a cause and eventually a valuable collection would be established where students might assemble to learn more about these plants. The need of a headquarters and permanent office is well known and progress will be greater as soon as proper facilities are acquired. The McCabe garden itself is an inspiration with the healthy growth of its many cacti and succulents. Mrs. McCabe's propagation of cacti is a fine constructive work and we are glad of such loyal members.

Change in Name of Journal

For convenience in filing and reference the name of this Journal is changed from "Journal of the Cactus and Succulent Society of America" to "Cactus and Succulent Journal." The Journal is now two years old and is the only magazine in this country dealing exclusively with cacti and succulents. Reference from now on will be made to the "Cactus Journal." It is still owned and controlled 100% by the Society and all work and contributions are voluntary.

*The Glen,
Great Brak River,
Cape Province,
South Africa.*

Editor Cactus Journal:

I was very much interested in the article, "African Gems," in the April number of the Journal. What is said about putting stones close under Punctillaria, etc., is going to be done on my rockery at once, as I find that so many of my Mesembs go in winter. Glott neilii is the worst and I have to renew them every year.

I think Lithops will stand the open very well; they or at least *L. lesliei* come from Vereeshrd and I had a letter from a man there yesterday saying he has to cover his rockeries every night now to keep off the worst frost. I was so pleased the other day while weeding to find numbers of seedlings of *L. lesliei* all around the old plants. They look like little brown beads in the ground.

Again thanking you for the interesting article,

Yours sincerely,

D. VAN DER BIJL.

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